



# The Mediating Role of Psychological Resilience in the Relationship between Parent-child Attachment and Adolescent Depression

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## Abstract

**Objective:** This study aimed to investigate the relationship between parent-child attachment and depression-anxiety-stress symptoms among adolescents, and to examine the mediating role of psychological resilience in this relationship. **Methods:** Using a longitudinal design, 380 junior high school students were surveyed three times at 6-month intervals. The Adolescent Parent-Child Attachment Scale, Psychological Resilience Scale, and Depression-Anxiety-Stress Scale (DASS-Y) were administered. Structural equation modeling was used to analyze the predictive effect of parent-child attachment on emotional problems and the mediating pathway of psychological resilience. **Results:** Parent-child attachment not only directly negatively predicted adolescents' depression-anxiety-stress symptoms ( $\beta = -0.21, P < 0.001$ ) but also produced a significant indirect effect by enhancing psychological resilience ( $\beta = -0.17, P < 0.001$ ). The partial mediating effect of psychological resilience accounted for 44.7% of the total effect. **Conclusion:** Parent-child attachment serves as an important protective factor against emotional problems in adolescents, with psychological resilience playing a key mediating role. Families and schools should focus on building secure parent-child relationships and enhancing adolescents' emotional adaptability by fostering psychological resilience.

## Keywords

Parent-child attachment; psychological resilience; depression-anxiety-stress; adolescents; mediating effect

## Introduction

A positive parent-child relationship is a cornerstone for the healthy development of adolescents. However, as adolescent mental health issues become increasingly prominent, there is an urgent need to explore effective protective factors. Previous studies have shown that parent-child attachment, as a core element of the family environment, significantly predicts adolescent depressive emotions (Zhang, 2021). However, the underlying mechanisms through which parent-child attachment influences depression are not yet fully understood, particularly regarding the critical role of psychological resilience in this relationship, which requires further exploration.

Existing research on parent-child attachment and adolescent depression has two limitations. First, most studies focus on the direct effects of parent-child attachment on depression, while relatively neglecting the mediating pathways involved (Gao, 2019). Second, although studies have begun to highlight the protective role of psychological resilience, such as its ability to buffer the impact of negative life events on depression (Wei, 2025), research on its mediating mechanism in the relationship between parent-child attachment and depression remains scarce, especially

longitudinal studies (Wang, 2018).

This study focuses on psychological resilience and examines its mediating role in the relationship between parent-child attachment and adolescent depression. Psychological resilience refers to an individual's ability to adapt positively and recover when facing adversity, trauma, or other significant stressors (Zhai & Zhang, 2025). This concept encompasses both an individual's intrinsic traits and the synergistic role of external support systems, providing a critical perspective for understanding how adolescents maintain mental health in challenging environments. Additionally, existing research has predominantly focused on risk factors for depression, with relatively less attention given to protective factors such as psychological resilience (Chen & Zhang, 2025). Psychological resilience emphasizes the process of positive adaptation under stress, offering a new theoretical framework for developing constructive intervention programs for adolescent depression.

Based on attachment theory and social support theory, this study proposes that psychological resilience mediates the relationship between parent-child attachment and adolescent depression. Secure parent-child attachment provides adolescents with an emotional secure base, enabling them to confidently explore the external environment and receive necessary emotional support when facing challenges (Gomes, 2025). This function of the secure base helps adolescents develop effective emotion regulation strategies and problem-solving skills, which in turn enhances their level of psychological resilience (Uslu, 2024). Meanwhile, according to the framework theory of psychological resilience, external support resources need to work through an individual's internal protective factors (Ni, 2025). As a critical external support resource, parent-child attachment enhances adolescents' psychological resilience, thereby reducing their risk of depression (Wang, 2024).

Previous studies have shown that high-quality parent-child relationships promote adolescents' emotion regulation and social adaptability, which are key components of psychological resilience (Fan, 2025). Enhanced psychological resilience has also been proven to alleviate adolescent depressive symptoms (Yuan, 2024). However, longitudinal research on how parent-child attachment influences depression through the enhancement of psychological resilience is still lacking (Liu & Feng, 2024). Particularly for adolescents, who are at a critical stage of psychosocial development, clarifying this mechanism holds significant theoretical and practical value (Mao & Wang, 2013).

In summary, adolescent parent-child attachment not only provides emotional security but also enhances stress-coping abilities by fostering psychological resilience, thereby reducing depression risk. This study employs a longitudinal design to construct a mediation model, examining the impact of parent-child attachment on adolescent depression and the mediating role of psychological resilience in this process.

## 1. Research Methods

### 1.1 Participants

This study adopted a longitudinal tracking design. During the baseline measurement (T1), a total of 415 adolescents participated. After a 6-month interval (T2), 398 valid questionnaires were successfully tracked and collected. After another 6-month interval (T3), 380 valid questionnaires were finally collected. All returned questionnaires underwent strict quality control, excluding those with regular response patterns, excessively short completion times, or missing key demographic information. The final sample included 380 participants. Among them, 184 were males and 196 were females; 132 were in Grade 7, 148 in Grade 8, and 100 in Grade 9. Informed consent was obtained from all participants, who voluntarily participated and retained the right to withdraw at any time.

### 1.2 Research Tools

#### 1.2.1 Adolescent Parent-Child Attachment Scale

This scale assesses the quality of emotional bonding perceived by adolescents with their parents. It comprises 15 items rated on a 5-point Likert scale (1 = "Never", 5 = "Almost always"). Higher scores indicate more secure and positive parent-child attachment. The overall Cronbach's  $\alpha$  coefficient in this study was 0.92.

#### 1.2.2 Psychological Resilience Scale

This scale measures adolescents' ability to adapt positively and recover from adversity and stress. It includes 10 items rated on a 5-point Likert scale (1 = "Never", 5 = "Always"). Higher scores indicate a higher level of psychological resilience. The overall Cronbach's  $\alpha$  coefficient in this study was 0.89.

#### 1.2.3 Depression-Anxiety-Stress Scale (DASS-Y)

The youth version of the DASS, the DASS-Y, assesses negative emotional experiences over the past week. It consists

of 21 items, covering three sub-dimensions: depression, anxiety, and stress. Items are rated on a 4-point Likert scale (0 = “Not applicable”, 3 = “Extremely applicable”). Higher scores indicate more severe emotional problems. The scale demonstrated good reliability and validity among the adolescent population. The overall Cronbach’s  $\alpha$  coefficient was 0.94, with  $\alpha$  coefficients of 0.88, 0.85, and 0.86 for the depression, anxiety, and stress sub-dimensions, respectively.

### 1.3 Procedure

This study used class-based cluster sampling and group administration. Several classes of students were randomly selected from the 7th to 9th grades across 4 junior high schools in a city. Prior to distributing the questionnaires, informed consent was obtained from school administrators, class teachers, students, and their parents. T3 measurements were conducted from late August to early September 2025, with questionnaires administered collectively in classrooms or school computer labs, from class to class.

### 1.4 Data Analysis

Data analysis was conducted using SPSS 26.0 software. Demographic variables were numerically coded for subsequent analysis, with gender (male = 1, female = 2) and grade (Grade 7 = 1, Grade 8 = 2, Grade 9 = 3) being included. Harman’s single-factor was used to check for common method bias, and the result showed that the variance explained by the largest factor was 26.7%, which is below the 40% critical threshold, indicating no severe common method bias in this study.

Based on the research hypotheses, the data analysis proceeded as follows: (1) Descriptive statistics and correlation analysis were first performed on the study variables; (2) A structural equation model was then constructed, controlling for grade and gender, to examine the effects of parent-child attachment on depression, anxiety, and stress symptoms, as well as the mediating role of psychological resilience; (3) Finally, the Bootstrap sampling method was used to perform 5000 resampling iterations to test the significance of the mediating effects.

## 2. Research Design

### 2.1 Model Construction

To examine the mechanism of psychological resilience between parent-child attachment and adolescent emotional problems, a mediation model was constructed. In the model, parent-child attachment serves as the independent variable, psychological resilience as the mediator, and depression, anxiety, and stress symptoms as the dependent variable. The model also controls for demographic variables such as gender and grade. The goal is to systematically investigate both the direct effect of parent-child attachment on emotional problems, and its indirect effect through the enhancement of psychological resilience.

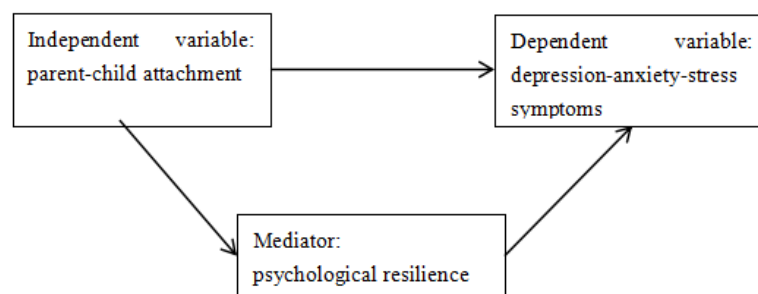


Figure 1. Theoretical Model.

### 2.2 Hypotheses

According to attachment theory, a secure parent-child attachment provides adolescents with emotional support and a sense of security, which can directly alleviate emotional problems such as depression and anxiety. As an important

external resource, parent-child attachment helps adolescents cope with stress and life challenges more effectively, thereby directly reducing the risk of emotional problems. Based on this rationale, this study proposes the following hypothesis:

**H1:** Parent-child attachment significantly and negatively predicts adolescent depression-anxiety-stress.

Based on the framework of psychological resilience, external protective resources exert their effects more effectively by activating individuals' internal protective factors. High-quality parent-child relationships can provide emotional support and coping models for adolescents, promoting the development of psychological resilience, which has been confirmed as a key mechanism for resisting mental health problems. Accordingly, this study proposes the following hypothesis:

**H2:** Psychological resilience mediates the relationship between parent-child attachment and depression-anxiety-stress symptoms.

### 3. Results

#### 3.1 Descriptive Statistics

The study included 380 junior high school students, and the demographic characteristics of the sample are summarized as follows:

**Gender distribution:** There were 199 females (52.37%) and 181 males (47.63%), showing a roughly balanced gender ratio, which helps reduce bias due to gender imbalance.

**Age distribution:** Participants' ages ranged from 12 and below to 18 and above, with a relatively even distribution across age groups. The largest group was 15-year-olds (59 students, 15.53%), while the smallest was 13-year-olds (42 students, 11.05%). This distribution reflects the typical age characteristics of junior high school students and adequately represents the psychological features of adolescents at this developmental stage.

**Family structure:** The proportion of only children was significantly higher than non-only children (72.37% vs. 27.63%), reflecting both the family planning policies in the sampling region and recent changes in population policy, as well as regional family structure characteristics.

**Residential location:** Students from towns comprised the largest group (150, 39.47%), followed by urban areas (118, 31.05%) and rural areas (112, 29.47%). This relatively balanced urban-rural distribution allows for exploration of environmental influences on adolescent psychological development.

**Primary caregivers:** The majority of students were primarily raised by their parents (275, 72.37%), while 27.63% were mainly cared for by grandparents. It reflects to an extent the prevalence of intergenerational caregiving in the current family context.

Overall, the sample demonstrated good representativeness in demographic characteristics, providing a solid foundation for examining the relationships among parent-child attachment, psychological resilience, and adolescent mental health.

**Table 1. Demographic Characteristics of Participants (N=380)**

Variable	Category	n	Percentage (%)
1. Gender	Female	199	52.37
	Male	181	47.63
2. Age	≤12 years	56	14.74
	13 years	42	11.05
	14 years	56	14.74
	15 years	59	15.53
	16 years	56	14.74
	17 years	56	14.74
	≥18 years	55	14.47
3. Only Child	No	105	27.63

Table 1 Continued

	Yes	275	72.37
4. Residence	Town	150	39.47
	Rural	112	29.47
	Urban	118	31.05
5. Primary Caregiver	Parents	275	72.37
	Grandparents	105	27.63
<b>Total</b>		<b>380</b>	<b>100.0</b>

### 3.2 Correlation Analysis

The results of the correlation analysis in Table 2 clearly reveal close relationships among parent-child attachment, psychological resilience, and adolescent emotional problems.

There was a significant positive correlation between parent-child attachment and psychological resilience ( $r = 0.38$ ,  $p < 0.001$ ), indicating that higher perceived quality of parent-child attachment is associated with higher levels of psychological resilience over time. Secure parent-child relationships provide emotional support and a sense of safety, which help adolescents develop internal capacities to cope with stress.

A significant negative correlation between parent-child attachment and depression, anxiety, and stress symptoms was observed ( $r = -0.33$ ,  $p < 0.001$ ), suggesting that better parent-child relationships directly predict lower levels of emotional problems in subsequent development. Meanwhile, psychological resilience was also significantly negatively correlated with emotional problems ( $r = -0.52$ ,  $p < 0.001$ ), with a stronger association than the direct link between parent-child attachment and emotional problems. This indicates that psychological resilience plays a particularly critical role in protecting adolescents' mental health.

Table 2. Pearson Correlations Among Variables (n=380)

Variable	$M \pm SD$	1	2	3
1. Parent-Child Attachment	3.65 $\pm$ 0.82	1		
2. Psychological Resilience	3.41 $\pm$ 0.79	0.38***	1	
3. Depression-Anxiety-Stress	1.89 $\pm$ 0.68	-0.33***	-0.52***	1

Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

### 3.3 Mediation Analysis

Based on the research hypotheses, a structural equation model was constructed with parent-child attachment as the independent variable, psychological resilience as the mediator, and depression, anxiety, and stress symptoms as the dependent variable. Model fit indices indicated good fit:  $\chi^2/df = 2.58$ , CFI = 0.97, TLI = 0.96, RMSEA = 0.06.

Path analysis results (see Figure 2) showed that parent-child attachment significantly and positively predicted psychological resilience ( $\beta = 0.38$ ,  $p < 0.001$ ), and psychological resilience significantly and negatively predicted depression, anxiety, and stress symptoms ( $\beta = -0.51$ ,  $p < 0.001$ ). Meanwhile, the direct effect of parent-child attachment on depression, anxiety, and stress symptoms was also significant ( $\beta = -0.19$ ,  $p < 0.01$ ), supporting H1.

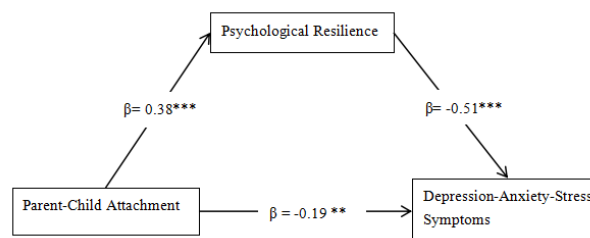


Figure 2. The Mediating Role of Psychological Resilience Between Parent-Child Attachment and Adolescent Depression.

The mediation effect was tested using the Bootstrap method with 5000 resamples. The results (see Table 4) showed that the indirect effect of parent-child attachment on depression, anxiety, and stress symptoms through psychological resilience was -0.19, with a 95% confidence interval of [-0.25, -0.14], which does not include 0. The direct effect was -0.19, with a 95% confidence interval of [-0.29, -0.09], also excluding 0. These results indicate that psychological resilience partially mediates the relationship between parent-child attachment and depression, anxiety, and stress symptoms, supporting H2.

**Table 3. Bootstrap Test of Mediating Effects**

Effect Type	Path	Effect	SE	95% CI	Relative Effect	<i>p</i>
Direct Effect	Parent-Child Attachment → Depression-Anxiety-Stress	-0.19	0.05	[-0.29, -0.09]	55.3%	0.01
Indirect Effect	Parent-Child Attachment → Psychological Resilience → Depression-Anxiety-Stress	-0.19	0.03	[-0.25, -0.14]	44.7%	0.001
Total Effect	Parent-Child Attachment → Depression-Anxiety-Stress	-0.38	0.05	[-0.48, -0.28]	100%	0.001

#### 4. Discussion

This study examined the relationship between parent-child attachment and adolescents' depression, anxiety, and stress symptoms, as well as the mediating role of psychological resilience. The results indicate that parent-child attachment not only directly and negatively predicts adolescents' emotional problems but also exerts a significant indirect effect by enhancing psychological resilience. These findings reveal the underlying mechanisms through which the family environment promotes adolescent mental health and provide both theoretical foundations and practical implications for preventive interventions targeting emotional problems in adolescents.

Specifically, the results showed that parent-child attachment significantly and negatively predicts depression, anxiety, and stress symptoms in adolescents, consistent with previous research on the relationship between family environment and adolescent mental health (Santosh, 2025). Longitudinal research by Zhai et al. also demonstrated that parent-child attachment serves a protective role in the relationship between childhood maltreatment and depression. Building on this, the present study further verified the stability of this effect using longitudinal data, highlighting the importance of establishing secure parent-child attachment for promoting adolescent emotional well-being. These findings support and extend the applicability of attachment theory in the domain of adolescent emotional problems, suggesting that secure attachment relationships, fostered by parents through respecting children's feelings, accepting their authentic selves, and providing emotional support, can offer adolescents an effective emotional buffer, helping them better cope with the stresses and challenges inherent in the developmental process.

Psychological resilience was found to partially mediate the relationship between parent-child attachment and emotional problems, enriching our understanding of the underlying mechanisms through which the family environment affects adolescent mental health (Bergström, 2025). The results indicate that a secure parent-child relationship not only directly protects adolescents from emotional difficulties but, more importantly, indirectly enhances their ability to cope with adversity by fostering the development of psychological resilience. Consistent with this, Uslu et al. reported a mediating role of resilience between temporal factors and psychological outcomes, supporting the findings of the present study. The mediating effect of psychological resilience accounted for 44.7% of the total effect, highlighting it as an important—but not the sole—pathway through which parent-child attachment influences adolescent emotional health. Future research should explore other potential mediators, such as emotion regulation skills and self-efficacy.

From a positive psychology perspective, this study deepens our understanding of protective factors against adolescent emotional problems, revealing the internal pathway through which parent-child attachment promotes emotional well-being by cultivating psychological resilience (Morrison, 2025). The findings also validate and extend the application of the psychological resilience framework within the family context, demonstrating that secure parent-child relationships can effectively transform external support into internal psychological resources, which in turn have a profound impact on emotional health. Gomes et al. similarly emphasized the importance of assessing adolescent resilience, corroborating the results of this study.

From a practical standpoint, the study provides important implications for preventive interventions targeting

adolescent emotional problems within the family. First, parents and educators should fully recognize the importance of establishing secure parent-child relationships, creating a warm and safe family environment through respect, acceptance, and emotional support (Shimoda & Morisaki, 2024). Second, interventions should focus on fostering adolescents' psychological resilience, converting external family support into internal resources. Parents can intentionally encourage their children to face challenges and provide problem-solving demonstrations to help them build coping skills in practice. School-based mental health programs can also incorporate resilience training into the curriculum through group counseling, scenario simulations, and other methods to strengthen students' psychological flexibility. Additionally, for adolescents already experiencing emotional difficulties, psychological counseling can simultaneously target improvements in family interaction patterns and the enhancement of individual resilience, thereby achieving more effective intervention outcomes.

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